GUIDELINES ON PLANS AND AUTHORIZATIONS REQUIRED FOR DEVELOPMENT PROJECTS

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1. INTRODUCTION

Activities related to the development and production of petroleum resources in the Nova Scotia offshore area are administered by the Canada-Nova Scotia Offshore Petroleum Board (the "Board") pursuant to the Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act, S.C. 1988, c.28, as amended (the "Accord Act") and the Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act, S.N.S. 1987, c.3, as amended, as well as regulations made under those Acts. These two Acts and the regulations made thereunder are substantially identical with respect to the matters discussed in this Guideline. For the sake of simplicity, references will be to the federal Act and regulations only.

The regulations in force under the Accord Act are as follows:

Nova Scotia Offshore Certificate of Fitness Regulations, SOR/95-187, April 1995;

Nova Scotia Offshore Area Petroleum Diving Regulations, SOR/95-189, April

1995;

Nova Scotia Offshore Petroleum Production and Conservation Regulations, SOR/95-190, April 1995;

Nova Scotia Offshore Petroleum Drilling Regulations; SOR/92-676, November 1992;

Nova Scotia Offshore Petroleum Installation Regulations, SOR/95-191, April 1995;

Canada - Nova Scotia Oil and Gas Spills and Debris Liability Regulations, SOR/95-123, February 1995;

Nova Scotia Offshore Area Petroleum Geophysical Operations Regulations, SOR/95-144, March 1995;

Approvals issued by the Board are also conditional upon the proponent complying with the following:

Petroleum Occupational Safety and Health Regulations - Nova Scotia, Draft, May 1990, and

Canada Oil and Gas Operations Regulations, SOR/83-149, February 1983.

The Board should be contacted prior to beginning the Development Application process to obtain the current regulations.

This Guideline is published pursuant to s. 156 of the Accord Act to outline the plans and authorizations required in connection with an offshore oil or gas Development Project in the Nova Scotia offshore area, and the requirements of the Board in respect of applications for the approval of such plans and the granting of such authorizations.

2. REQUIREMENTS AT DEVELOPMENT PLAN STAGE

2.1 DEVELOPMENT PLAN

The Development Plan is the basic document governing the development of a pool or field; except with the consent of both the federal and provincial Ministers of Natural Resources, the Board cannot authorize any work or activity in relation to developing a pool or field unless the Board has approved a Development Plan, s. 143(1). Once a Development Plan has been approved, the Board may only authorize a work or activity in the offshore area, if it is in accordance with the Development Plan, s. 142 (1)(b)(ii).

A Development Plan must be set out in two parts, referred to as Part I and Part II, s. 143(3). Part I is "a description of the general approach of developing the pool or field, and in particular, information . . . with respect to:

(i) the scope, purpose, location, timing, and nature of the proposed Development;

(ii) the production rate, evaluations of the pool or field, estimated amounts of petroleum proposed to be recovered, reserves, recovery methods, production monitoring procedures, costs and environmental factors in connection with the proposed Development, and

(iii) the production system and any alternative production systems that could be used for the Development of the pool or field.

Part II of the Plan is "all technical or other information and proposals, as may be prescribed, necessary for a comprehensive review and evaluation of the proposed Development." Part II of the Plan may be submitted in the form of a "bibliography".

The Board could then request any items which it does not have access to, if required.

The Plan should be presented at the level of detail that the available data and the design concepts permit. Elements of the Plan which are based on complex or uncertain subject matter should be identified as such and the treatment of these elements in Part I should reflect sufficient flexibility to address all eventualities.

The approval of Part I of the Plan (but not Part II) is a "fundamental decision", meaning that notice of the decision must be given to the federal and provincial Ministers of Natural Resources. The Provincial Minister acting alone may set aside the decision. The decision cannot be implemented for 30 days after notice has been given to the ministers, unless both ministers approve it before that time. In addition, either the federal or the provincial minister may suspend implementation of the decision for up to 60 days after receipt of the notice.

A person who makes an application in respect of which a fundamental decision is to be made must give a written summary of the application to the federal and provincial Ministers of Natural Resources forthwith after making the application, s. 19(3). The Board accordingly requires that an application for approval of a Development Plan be accompanied by a summary of the application.

An application for the approval of a Development Plan shall be submitted to the Board in the form and containing the information prescribed by the Board, s. 143(2). The prescribed form of application is attached as Appendix A.

2.2 CANADA-NOVA SCOTIA BENEFITS PLAN

Before the Board may approve any Development Plan or authorize any work or activity, a Canada-Nova Scotia Benefits Plan must be approved by the Board, unless the Board waives that requirement with the consent of both the federal and provincial Ministers of Natural Resources, s. 45(2). A Canada-Nova Scotia Benefits Plan is :

"a plan for the employment of Canadians and, in particular, members of the labour force of the Province [of Nova Scotia] and . . . for providing manufacturers, consultants, contractors and service companies in the Province and other parts of Canada with a full and fair opportunity to participate on a competitive basis in the supply of goods and services used in any proposed work or activity referred to in the Benefits Plan." s. 45(1)

The Board's requirements in respect of Canada-Nova Scotia Benefits Plans are set out in a separate document entitled Industrial Benefits and Employment Plan Guidelines.

2.3 ENVIRONMENTAL IMPACT STATEMENT

Under the Accord Act and regulations the Board has a requirement to satisfy itself that activities associated with the Development Project can be conducted in an environmentally safe manner prior to authorizing those activities. The Board accomplishes this by, among other things, undertaking an environmental assessment of the Project.

The Canadian Environmental Assessment Act also requires an environmental

assessment to be undertaken by responsible authorities for projects identified in the Canadian Environmental Assessment Act or its regulations. The Board is not a responsible authority under the Canadian Environmental Assessment Act, therefore the Board cannot trigger an environmental assessment for a project under the Canadian Environmental Assessment Act. However, an environmental assessment may be triggered under the Canadian Environmental Assessment Act by one or more responsible authorities for Development Projects for which the Board has regulatory responsibilities. When responsible authorities are required to conduct an environmental assessment of a Project for which the Board has regulatory responsibilities, the Board will determine with those responsible authorities the duties and functions to be shared for an assessment pursuant to the Canadian Environmental Assessment Act. For a Project which involves no responsible authorities, the Board will adopt the criteria of the Canadian Environmental Assessment Act for the purposes of assessing the environmental effects of a proposed Project in order to maintain consistency and avoid conflict.

The Applicant seeking approval of a Development Plan shall prepare an Environmental Impact Statement outline based on the requirements of these Guidelines and input from the public. This outline should be forwarded to the Board as early in the planning stages as possible. The outline should include the measures that will be taken to consult with the public. The Board will act as the lead regulatory authority in the review of this proposed outline. It will distribute it to regulatory authorities and coordinate the comments received.

The Environmental Impact Statement prepared for submission to the Board will satisfy the requirements of a Comprehensive Study under the Canadian

Environmental Assessment Act. The Canadian Environmental Assessment Act Comprehensive Study List Regulations (Part IV) lists the oil and gas projects which must undergo a comprehensive study. An Environmental Impact Statement shall include a consideration of the effects outlined in section 16 of the Canadian Environmental Assessment Act. The requirements for a Comprehensive Study are summarized as follows:

the purpose of the Project;

the environmental effects of the Project, and their significance,

including:

- malfunctions or accidents,

- cumulative environmental effects from this Project and this

Project in combination with other projects;

measures that are technically and environmentally sound that would

mitigate any significant adverse environmental effect (Environmental

Protection Plan); alternative means (development schemes) that are technically and environmentally feasible and the environmental effects of any such

alternative means; the need for, and the requirements of any follow-up program in respect of the Project; the capacity of the renewable resources that are likely to be significantly affected by the Project to meet the needs of the present

and those of the future; comments from the public and, any other relevant matter .

The Board requires that the Environmental Impact Statement also address the socio-economic aspects of the Project. The Board will not require a separate socio-economic assessment under section 44 of the Accord Act.

Where the Development Project triggers an environmental assessment under the Canadian Environmental Assessment Act and, the Board in consultation with the responsible authorities determine that a public review is not appropriate, the responsibility authorities will forward the Environmental Impact Statement (Comprehensive Study under the Canadian Environmental Assessment Act) to the Canadian Environmental Assessment Agency for public distribution and direction

to the responsible authorities by the Minister, Environment Canada. In most circumstances, the Board will not make a decision on the Development Project until this process is completed.

2.4 PUBLIC REVIEW

Where the Board is of the opinion that it is in the public interest to do so, it may conduct a public review in relation to the exercise of any of its powers or the performance of any of its duties, s. 44(1). It is the Board's policy to conduct a public review for major Development Projects. The Board may appoint one or more commissioners for this purpose, who would hold public hearings and report to the Board and the federal and provincial Ministers of Natural Resources, s. 44(2)(c). Where a public review is conducted in relation to any potential Development of a pool or field, the Board may require the Applicant to submit and make the following available for public access:

Development Application Summary;

Development Plan;

Environmental Impact Statement;

Preliminary Canada-Nova Scotia Benefits Plan, or

any other plan specified by the Board.

The commissioners shall make their recommendations respecting such preliminary plans or statements within 270 days after receipt or such shorter period as may be set by the Board, s. 44(4).

Where there are other authorities under the Canadian Environmental Assessment Act or other government departments that may require certain aspects of the proposed Project to be subject to a public review, the Board will work with the other agencies to establish a joint review process that will satisfy the requirements of all agencies or departments in a single process.

The Applicant is encouraged to provide the Board with a notice of intent regarding the filing of a Development Plan as early as possible. This should include a description of the proposed Project so that other agencies that may be affected can be advised. The Board will then commence the inter-agency discussions to determine if a joint public hearing process is required and begin making preparations for a public review.

2.5 DEVELOPMENT APPLICATION SUMMARY

If a public review is conducted, the Board will require the Applicant to prepare a summary of its application and the various plans and statements to be considered, for wide distribution to the public. This should be written in a manner that will provide the non-specialist reader with a sufficiently comprehensive overview to enable that person to reach an informed opinion concerning the proposed

Development.

3. CONFIDENTIALITY

Subject to certain exceptions, information provided for the purposes of the Accord Act is privileged, s. 122. It is the Board's policy that as a general rule all materials considered by the Board in conjunction with a Development Application will be available to the public. Requests to treat specific information confidentially will be considered individually by the Board and may be granted as exceptions to the general rule if the Applicant can demonstrate that the reasons for keeping the information confidential outweigh the public interest in full disclosure.

4. OTHER AUTHORIZATIONS REQUIRED

The Development Plan will not grant the Applicant authority to undertake any work in the offshore area. Prior to work being undertaken, job-specific authorizations are required from the Board. The key authorizations are listed below. In addition, other agencies may require separate authorizations for certain activities. The Board will assist the Applicant in identifying requirements of other agencies and, to the greatest extent possible, ensure effective coordination and avoid any potential duplication.

All offshore installations and equipment associated with installations required for the drilling and production of hydrocarbons must receive a Certificate of Fitness pursuant to the Nova Scotia Offshore Certificate of Fitness Regulations. Some of the listed authorizations will not be granted until a valid Certificate of Fitness is issued by a Certifying Authority and is received by the Board.

Appendix C is a schematic of key applications and authorizations for the

Development Project.

Authorizations that are required prior to commencing production include:

Declaration of Commercial Discovery

Required by the Accord Acts as a pre-requisite to the issuance of a Production Licence. The Board shall, on the application of the interest holder, make a written declaration of commercial discovery in relation to those portions of the offshore area in respect of which there are reasonable grounds to believe that the commercial discovery may extend. The required information and prescribed form and manner of application are available from the Board.

Issuance of Production Licence

Required by the Accord Act. Production rights and title to produced petroleum are conferred by Production Licences. A Production Licence may be issued in respect of any portion of the offshore area subject to a declaration of Commercial Discovery. The required information and prescribed form and manner of application are available from the Board.

Operating Licence

Required by the Accord Act, must be renewed annually.

Authorization to Install Production Installation

Required by the Board. Issued subsequent to the Board and the Certifying Authority being satisfied that the transportation procedures are safe and that the subject installation is fit to be installed.

Drilling Program Authorization

Required by the Nova Scotia Offshore Petroleum Drilling Regulations.

This authorization addresses the drilling unit equipment and general safety procedures ensuring they are capable of drilling safely in all areas defined. The drilling unit requires a Certificate of Fitness prior to the Drilling Program Authorization being granted.

Approval to Drill a Well

Required by the Nova Scotia Offshore Petroleum Drilling Regulations. A well-specific program is to be prepared and submitted to the Board for approval. General procedures given in the Drilling Program Authorization need not be repeated.

Production Operations Authorization

Required by the Nova Scotia Offshore Area Petroleum Production and Conservation Regulations. Prior to the Board granting a Production Operations Authorization, the production installations must have an approved Safety Plan, an approved Environmental Protection Plan and a valid Certificate of Fitness.

Diving Program Authorization

Required by the Nova Scotia Offshore Area Petroleum Diving Regulations. All dive programs must be approved by the Board. Diving systems require a Certificate of Fitness.

Prior to the abandonment of offshore facilities, an Abandonment Program Authorization is required from the Board. The program is to be in compliance with the abandonment plan as outlined in the Development Plan. The specific details

and procedures must be submitted to the Board for approval at the time of abandonment. The removal of installations from the site is to be planned so as not to cause significant effects to navigation or to the marine environment. Wells are to be abandoned as specified in the Nova Scotia Offshore Drilling Regulations and the Nova Scotia Offshore Production and Conservation Regulations.

APPENDIX A

DEVELOPMENT PLAN REQUIREMENTS

INTRODUCTION

As outlined in section 2.1 a Development Plan must be set out in two parts, referred to as Part I and Part II. Part I is a description of the general development approach. Its components are considered fundamental to the proposed Development. The Applicant should exercise prudence to ensure that elements of the Plan which are subject to substantive change, or may require a flexible approach, are clearly identified as such in Part I of the Plan. Part II consists of all technical material and detailed information necessary to support the proposed Development Plan. Part II of the Plan may be submitted in the form of a "bibliography". The Board could then request any items which it does not have access to, if required.

1. PROJECT OVERVIEW

Part I

An overall description of the proposed Development Project should be presented including:

- purpose and scope of the Development;
- brief history of the field(s) or pool(s) from discovery to present;

- maps showing location of the field(s) or pool(s) and proposed position of platforms, subsea systems, storage facilities and loading systems;
- schedule showing key decisions and milestones for the design, construction, transportation, installation, commissioning and certification of the production installation, and
- description of operational constraints associated with the proposed production scheme.

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Part II

Additional studies which support Part I may be included if appropriate.

2. GEOLOGY AND GEOPHYSICS

Part I

Develop a brief stratigraphic sedimentological and structural review for the geological setting of the field and of each pool which includes:

- a tectonic and stratigraphic overview of the regional and field geology;
- a brief deposition and post-deposition history of each reservoir unit;
- a description of structural and/or stratigraphic trapping mechanism;
- a description of sedimentology of each reservoir and effects of diagenesis on porosity and permeability development;
- the source, generation and migration of hydrocarbons;
- a description of any anomalous fluid pressures encountered or predicted from seismic information or from regional studies, and
- schematic cross-sections, depth structure maps and net pay maps for each field or pool.

Part II

In Part II the Board expects the preceding description to be supported by structural and/or stratigraphic cross sections with stratigraphic and/or bio-stratigraphic correlation, and, for each reservoir unit, paleogeographical and structural maps in time and depth. Each reservoir sub-unit should be illustrated by:

- an isopach map of gross and net pay;
- an isoporosity map, and
- a hydrocarbon pore volume map.

A-3

Interpreted, migrated seismic sections tied to wells, together with a discussion of seismic data acquisition, processing and interpretation should be available for each field.

The above and any other studies or support data may be referenced through a "bibliography" to be submitted upon request by the Board.

3. RESERVOIR ENGINEERING

3.1 WELL TEST DATA

Part I

A description of the reservoir engineering data for each field is to be submitted including:

- a summary of drill stem and production test results, and
- reservoir fluid analyses with a discussion of any variations within sand(s) or between intervals or wells.

Part II

The Board expects the preceding to be supported by :

- specialized fluid analyses, where appropriate;

- analyses of production and drill stem tests;

- where injection of fluids is proposed, details of the composition of injected fluids, results of compatibility studies, injectivity and/or pulse tests, and

- reservoir temperature/depth and pressure/depth plots.

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The above and any other studies or support data may be referenced through a "bibliography" to be submitted upon request by the Board.

3.2 PETROPHYSICS

Part I

Petrophysical data and analytical procedures used to evaluate this data are to be provided, including a tabulation of the parameters derived from each reservoir in each well including gross and net pay, average porosity, permeability and water saturation.

Part II

The Board expects the preceding to be supported by the following information:

- assumptions, parameters and methods used to calibrate and interpret log data to determine water resistivity and porosity relationships, cut-off criteria used to estimate net pays and reasons for these criteria;

- a list of core intervals;

- results of routine and special core analysis and the methods used to adjust this data to reflect subsurface conditions;

- comparisons between data derived from logs and laboratory analyses;

- a description of future logging and coring programs to assist in the refinement of the geological model, and
- mineralogical analyses of core samples.

The above and any other studies or support data may be referenced through a "bibliography" to be submitted upon request by the Board.

3.3 RESERVE ESTIMATES AND RESERVOIR DEVELOPMENT

Part I

Reserve estimates and production forecasts for each pool or each production sub-unit are to be submitted along with supporting documentation including:

- results of volumetric calculations of oil-in-place and gas-in-place differentiating between solution gas, and gas-cap gas, and sensitivity analysis reflecting on any uncertainties in the data and interpretations;
- recoverable reserve estimates and production forecast supported by appropriate tables and graphs on an annual basis;
- an overview of alternatives regarding gas compression and the rationale for choosing the proposed scheme, and
- an overview of the primary and enhanced recovery schemes evaluated and the rationale for selecting the proposed scheme.

Part II

The Board expects the Applicant to have some or all of the following information to support the information submitted in Part I:

- descriptions of the computer simulation model or other analytical

techniques used for the evaluations;

- assumptions and reservoir parameters used for the calculations;

- estimated well requirements and spacing for production, injection, disposal and observation wells, if any, for each production scheme;

- for each pool, a prediction of the average reservoir pressure over the pool's producing life;

- typical tubing programs including inflow and performance evaluation;

- results of any pilot projects or special laboratory studies which impact on the reserve estimates;

- gas conservation measures, and

- with regards to any hydrocarbon reserves which have been identified but are not being developed, the reasons for not proceeding should be included.

The above and any other studies or support data may be referenced through a "bibliography" to be submitted upon request by the Board.

4. DEVELOPMENT DRILLING AND COMPLETIONS

Part I

This section should provide a history of drilling activities carried out at the production site and the proposed drilling programs including the completions design for the development wells. The following should be presented where appropriate:

- a description of existing wells and planned use of existing wells;

- a description of unusual drilling hazards;

- a preliminary schedule for the drilling of production and injection wells;

- typical casing/completion diagrams, for production and injection wells;

- an overview of drilling fluid plans and plans for solids control equipment;

- a discussion of artificial lift requirements and expected timing of installations;

- an overview of directional drilling plans, complete with systems to be used for design, data keeping and error and safety considerations, and

- a discussion of simultaneous drilling and production requirements and procedures, if any.

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Part II

Material to support the preceding information should be included in this section. The Applicant is not required to submit detailed equipment design and operating procedures in this section. These topics will have to be submitted in the application for the Drilling Program Authorization and, in the case of individual well designs, in the application for Approval to Drill a Well to comply with Nova Scotia Offshore Petroleum Drilling Regulations. Approval of the Development Plan will not grant authority to conduct drilling operations.

5.0 PRODUCTION AND EXPORT SYSTEMS

INTRODUCTION

This section should provide a description of the production systems considered and of the system selected for the Development Application. The different systems considered should be supported by a discussion of the technical factors including design and environmental criteria, cost, schedule, operational and safety factors

leading to the selection of the preferred system.

The Applicant is not required to submit detailed design information, schematics, or operating procedures in this section. These issues will be subject to review by the Certifying Authority and the Board, and will have to be acceptable in order to obtain a Certificate of Fitness and formal approval for installation in the offshore area. This section should provide details of the Certification Process including a discussion of the timing in regards to the initial involvement of the Certifying Authority and preparation of the scope of work. Approval of the Development Plan will not grant authority to install facilities or conduct work in the offshore area.

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5.1 DESIGN CRITERIA

Part I

The design philosophy for the production and export systems should be described with particular reference to any principles which have been adopted to ensure there will be due regard for safety including a discussion on any safety analysis and Quality Assurance and Quality Control programs required in the Nova Scotia Offshore Petroleum Installations Regulations.

The manner in which this philosophy will be incorporated in the design, construction, transportation, installation and operation of the production system and export system should be described by identifying rules, codes, standards and specifications and any other design criteria to be used.

Part II

Support data may be included in this section.

5.2 ENVIRONMENTAL CRITERIA

Part I

The Application should provide an overview of the Environmental Criteria to be used in the design of the production export systems. This discussion should include a summary of the mean and extreme values of physical environmental parameters including combinations of these parameters that could effect safety or operational efficiency. The plans and timing for finalizing the Environmental Design Criteria should be addressed.

Part II

Support data may be included in this section.

5.3 GEOTECHNICAL CRITERIA

Part I

The Applicant shall provide an overview of the seabed and subsoil conditions as they relate to the geotechnical aspects of the proposed Development including the production site, the subsea systems and pipelines. The discussion should include a review of existing site investigations, the influence of the soil and natural processes on the foundation design and behaviors, and any other geological factors affecting the construction, installation, operation and abandonment or removal of the production installations and pipelines. Also, a discussion of plans and timing of future surveys should be included.

Part II

Support data may be included in this section.

5.4 PRODUCTION INSTALLATION AND TOPSIDE FACILITIES

Part I

A description of the production installation is required. The description should include the number and the type(s) of production platform(s), and, where appropriate:

- a conceptual layout of the production installation(s), including the location of the production and drilling areas, living accommodations and helideck;

- a process flow diagram of the production facilities which indicates the operating pressures, temperatures and capacities, and
- components of the production system including the crude oil treatment system, gas compression, produced water systems, water injection systems, fluid measurement and control systems, and the gas release system.

If elements of the proposed production installation are not finalized at this point the issues and options should be discussed in this section.

Part II

Support data may be included in this section.

5.5 SUBSEA SYSTEM

Part I

A description of all subsea systems is required. The description should include, where appropriate:

- subsea wells and associated components;

- a discussion of protection of the subsea components from potential subsea erosion and scour, and

- a discussion regarding any concerns or precautions taken in relation to the fishing industry.

If elements of the proposed production installation are not finalized at this point the issues and options should be discussed in this section.

Part II

Support data may be included in this section.

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5.6 PRODUCTION AND OPERATIONS

Part I

This section should describe the procedures that will be prepared relevant to the production system. The description should include, where appropriate:

- a discussion of the production operations;

- a discussion of the general operations considerations associated with subsea components, and

- logistics to support the Development Project including the supply base, personnel movement, supply vessels and standby vessels.

Part II

Support data may be included in this section.

5.7 EXPORT SYSTEMS

Part I

A description of the storage, loading and transportation components of the export system is required. The general description should include, where appropriate:

- the capacity, efficiency factors and operational limitations for each component; and

- for pipelines, the proposed routing and landfall capacity.

Part II

This part should include where appropriate:

- a discussion of alternative storage, loading, transportation and pipeline systems considered, supported by technical information on the physical

environmental criteria, performance criteria, design, cost schedule, and operational constraints leading to the selection of the preferred system.

5.8 DECOMMISSIONING AND ABANDONMENT PROGRAM

Part I

This section should describe the provisions in the design to facilitate decommissioning and abandonment of the production installation at the end of its production life. An overview plan of the decommissioning and abandonment program and a discussion of the feasibility of the proposed procedures should be included. The suspension and abandonment of the wells should also be briefly discussed.

Part II

Any studies or data used to support the program outlined in Part I should be included in this section.

6. CONSTRUCTION AND INSTALLATION

Part I

An overview of the construction and installation of the production system and export system is required. Where appropriate, this overview should include:

- a Project schedule showing key decisions and milestones in the design, procurement and construction of all the major elements of the Development Project;
- proposed construction facilities including any associated port or marine terminal and accommodation vessels;

- proposed transportation and associated equipment and vessels;
- proposed launching techniques and associated equipment and vessels, and
- proposed installation at the production site and associated equipment and vessels.

Part II

Additional documentation to support the components of Part I should be provided in this section.

7. DEVELOPMENT ECONOMICS

Part I

This Section should provide an estimate of Development and operating costs to allow for a general financial and economic analysis to be made. The cost data should be provided in constant dollars accompanied by a description of methodology, assumptions, and basis for the cost estimates. A summary of the capital and annual

operating costs for the major components of the proposed production system and export system and each alternative production system and export system should be provided. Assumed production profiles used to forecast income to be generated are also required. Scoping economics may be provided to give an indication of the relative magnitude of the Project and to compare alternative systems that have been reviewed. However, if the Applicant does not wish to present economics, then it must provide all information necessary for the Board to perform such an economic evaluation. Past expenditures need only be included if they have any effect on the current economics. A summary of the requirements is as follows:

- production profiles/annual basis per field;
- operating costs/general categories given - annual basis;
- capital costs/general categories broken down c/w timing;

- alternate cases/the main cases considered to be presented, and
- areas of sensitivity/in regards to costs and/or production - areas of sensitivity or those subject to greatest error should be noted.

Part II

An overview of the preferred case should be presented in Part I with details plus alternate cases being reviewed in Part II.

8. LIABILITY AND COMPENSATION

Part I

This section of the Development Plan should acknowledge the environmental liabilities applicable to the Project by summarizing the relevant legislation, regulations, and where appropriate, agreements or government policies. While this

section focuses on oil spill and debris-related damages, related issues such as wild life harvest loss agreements should be addressed.

This section should describe the Applicant's environmental risk management program including details of the proposed security filings, compensatory instruments, and strategy for accommodating community concerns for environmental degradation.

This section of the Development Plan should also address the matters of evidence of financial responsibility for platform abandonment and for drilling. The Guidelines Respecting Financial Responsibility Requirements - For Drilling in Newfoundland and Nova Scotia Offshore Areas (available upon request from the Board) should be used as a base document. These guidelines do not cover Development Projects, but the Board expects similar type arrangements for these facilities as those required for drilling.

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Part II

Any data used to support the program outlined in Part I should be included in this section.

9.0 SAFETY PLAN

Part I

This section of the Development Plan should discuss how, when and what type of Safety Plan will be developed for the Project. Before authorizing a specific work or activity, the Board must consider the safety of the work or activity by reviewing, in consultation with the Chief Safety Officer, the system as a whole and its components, including its structures, facilities, equipment, operating procedures

and personnel, s. 142.2. The Applicant will accordingly be required to prepare and implement a comprehensive Safety Plan that provides for all matters related to the safety and health of personnel and the integrity of the installation.

The information submitted by an Applicant in this section should provide as much detail as this stage of the Development scheme permits. This section can be established as a basis from which to expand to the final Plan or it can be a conceptual plan outlining how and when the Applicant plans to develop the final Safety Plan. Aspects of the Safety Plan which will be required for the design and construction phase of the Project should be described thoroughly. The Applicant may wish to reference various manuals, policies or procedures as a means of addressing specific requirements of the Safety Plan.

The final Safety Plan will be a reference document for the life of the Development Project for personnel safety and operational safety matters and will be available for public examination. The Board's document Safety Plan Guidelines (3150.002) details the documented policies, standards and practices which must be addressed in the Applicant's Final Safety Plan.

9.1 CONCEPT SAFETY ANALYSIS

The Concept Safety Analysis required by s. 43 of the Nova Scotia Offshore Petroleum Installations Regulations will form part of the Safety Plan. If, at this stage, the planning for the Development is not in sufficient detail to warrant an analysis, the Chief Safety Officer may exempt the Applicant from certain provisions of this requirement provided it can be demonstrated that the studies planned to identify hazards, assess risks to the installation(s) and the means to mitigate these

risks, will be completed in sufficient time to provide an adequate level of safety.

Part II

Any data used to support the analysis outlined in Part I should be included in this section.

10. ENVIRONMENTAL PROTECTION PLAN

Part I

The Applicant of a production installation must develop an Environmental Protection Plan and submit it to the Chief Conservation Officer, prior to receiving a Production Operations Authorization. This is a requirement of the Nova Scotia Offshore Petroleum Production and Conservation Regulations, s. 51(2). A discussion in regards to the Environmental Protection Plan should be submitted to the Chief Conservation Officer at the time a Applicant applies for approval of a Development Plan, as it will form part of the Environmental Impact Statement.

An Environmental Protection Plan is a manual containing an outline of the operational strategies which the Applicant will follow to minimize or mitigate the environmental effects of the Project. The purpose of an Environmental Protection Plan is to provide detailed operational guidance on how to implement strategies required to protect the environment from the effects of the Project.

This section may either be a reference to the appropriate sections of the Environmental Impact Statement or a separate summary of the operational strategies which the Applicant plans to follow. It should include a discussion on the timing and contents of the Environmental Protection Plan, if not included in the Environmental Impact Statement. The final Environmental Protection Plan will be

a reference document for the life of the Project, and will be available for public examination.

Part II

Any studies or data used to support the program outlined in Part I should be included in this section.

11. CONTINGENCY PLANS

Both the Safety Plan and the Environmental Protection Plan must include contingency plans, dealing respectively with the response to and mitigation of accidental events affecting the safety of personnel or the integrity of the installation, and the response to and mitigation of the accidental release of petroleum or hazardous substances. The Nova Scotia Offshore Petroleum Installations Regulations, s. 51(1)(g) & 51(2)(a). What will be involved in developing these plans should be discussed in Sections 10 and 11. Traditionally these plans have resulted in a single document which covers both the safety and environmental aspects. This section should discuss the timing and contents of these plans.

APPENDIX "B"

APPLICATION FOR APPROVALOF A DEVELOPMENT PLAN

Applications for approval of Development Plans shall be in the form attached. These forms are available at the offices of the Board.

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CANADA - NOVA SCOTIA OFFSHORE PETROLEUM BOARD

APPLICATION FOR APPROVAL OF A DEVELOPMENT PLAN

1. The Applicant named below hereby applies to the Canada-Nova Scotia Offshore Petroleum

Board for approval of the Development Plan submitted herewith, pursuant to section 143 of

the Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act and

section 136 of the Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation

(Nova Scotia) Act.

2. The following schedules are attached to and form part of this application:

Schedule A: Interests and Interest Owners

Schedule B: List of Documents

Schedule C: Summary of Application

3. The Applicant states that:

(a) it is the duly authorized agent of all the interest owners named in Schedule A for

purposes of this application.

or

(b) it is acting in a capacity as described in a separate letter submitted herewith.

(Note: Delete either (a) or (b) as required. If (b) is applicable, submit explanatory

letter and include this in Schedule B, List of Documents.)

4. The address of the Applicant for service of all documents and communications related to this

application is:

Dated at , this day of 19 .

(Name of Applicant)

By:

(Signature)

(Title)

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Instructions

1. Schedule A: Interest and Interest Owners

Show lands affected by Development Plan and interests currently in effect.

Show interest owners for each interest and give the following information for each interest holder:

Full Legal Name

Citizenship or jurisdiction of incorporation

Head office address

(if general partnership, give above information for all parties; if a limited partnership, give above information for general partner and give jurisdiction in which limited partnership was formed).

2. Schedule B: List of Documents

List all documents comprising Part I and Part II of the Development Plan by

title, date and revision number. Also list other supporting material filed, if any.

3. Schedule C: Summary of Application

Attach copy of summary of application to be provided to Ministers in accordance with subsection 19(3) of Acts.

4. Please provide one original and five copies of this application, including schedules, Development Plan and any other supporting material filed.

5. Forthwith after making application, the Applicant shall provide the summary of the application attached as Schedule C to the Minister of Natural Resources for Canada and the Minister of Natural Resources for the Province of Nova Scotia.

NOTE: The legislation contains specific requirements concerning Development Plans. The attention of the Applicant is drawn to the following particular points:

(a) Once a Development Plan is approved by the Board, no amendment of Part I or Part II can be made unless it is approved by the Board. In addition, once a Development Plan is approved, the Board can only authorize work or activity that is in accordance with the Development Plan.

(b) Before the Board may approve any Development Plan or authorize any work or activity a Canada-Nova Scotia Benefits Plan must be submitted to and approved by the Board.

APPENDIX "C"

DEVELOPMENT APPLICATION PROCESS SCHEMATIC